GLOSSARY AND ACRONYMS

INTRODUCTION

This document contain a glossary to help decipher some of the technical terminology that National Aeronautics and Space Administration (NASA) and the Space Experiment Module (SEM) program uses. The glossary also helps define some terms to their specific meaning to SEM.

GLOSSARY

Active Experiments: Active Experiments are experiments which utilize the power, command, and data recording capabilities provided by the Module Electronics Unit (MEU). Active experiments must include (as part of the experiment) the electrical wiring which connects experiment components to the Module MEU. Active experiments may choose to monitor temperature profiles within individual Experiment Modules using NASA provided thermistors. Thermistors are small temperature sensors which can be mounted directly to experiment components using an adhesive. The thermistors are wired to the MEU as part of the experiment electrical wiring.

The Module Emblem Mounts are designed to attach to the exterior of each Experiment Module and provide the mounting surface for experiment emblems or decals. Emblem Mounts are sent to the student experimenters from NASA once they are selected to participate in the hardware phase of the SEM program. If an emblem is desired, it is the experimenters responsibility to design and manufacture their experiment emblem, attach the emblem to the NASA provided Emblem Mount, and send the Emblem Mount back to NASA for integration into the SEM Experiment Module.

Amps - Measures a unit of energy for electronics.

Amp-Hour - This is a unit of energy usage. It is the product of current and time.

Envelope, Experimenter - The area or volume boundary in which the experiment must stay within.

GSE - Any equipment used to service or support testing of flight hardware. It is only used on the ground. Typically this includes items such as test cables, computers, mechanical test fixtures, tools, etc.

Load - For electronics, it is a device that consumes power.

Passive Experiments: A Passive Experiment does not use the MEU and therefore does not use power or record data.

Pressure Vessel - Any container that is under internal pressure or will experience and internal pressure buildup.

Sealed Container - Any container designed to contain a gas or liquid with no vents.

ACRONYMS

A/D: Analog-to-Digital (converter)
A-Hr: Amp-Hour
BATT: Battery
BOB: Break-Out-Box
DOD: Depth-Of-Discharge (of batteries)

DOS: Disk Operating System
GAS: Get Away Special
GCD: GAS Control Decoder
GSE: Ground Support Equipment
GSFC: Goddard Space Flight Center
EDF: Experiment Data File
EMC: Electromagnetic Compatibility
EMI: Electromagnetic Interference
GMEU: Ground Module Electronics Unit
ICD: Interface Control Document (or Drawing)
IEP: Interface Equipment Plate
I/F: Interface I&T Integration and Testing
IVT: Interface Verification Testing
MCU: Micro-Controller Unit
MDF: Measurement Data File
MEU: Module Electronics Unit
NASA: National Aeronautic Space Administration
PGSC: Payload General Support Computer
PPC: Payload Power Contactor
SEM: Space Experiment Module
SEU: Single Event Upset
STS: Space Transport System
T-VAC: Thermal Vacuum
W-Hr: Watt-Hour

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SSPP: Shuttle Small Payloads Project

Rev: PRELIMINARY